WO 2005/032687 PCT/US2004/031913

I claim:

1. A distillation process comprising providing a mixture of a lower boiling point solvent and a higher boiling point target compound to an evaporator, flashing off a multi-component vapor containing said solvent and said target at a temperature below the boiling point of said target compound, subsequently separating said target from said mixture, and providing additional amounts of said solvent without said target to said evaporator.

- 2. A process according to claim 1 wherein said target compound is mixed with a non-volatile or very high boiling contaminate, which remains in said evaporator
- 3. A process according to claim 2 further comprising the step of providing said vapor to means for separating said target from said solvent.
- 4. A process according to claim 3 wherein said means for separating comprises a distillation tower.
- 5. A process according to claim 3 wherein said solvent is water and said target is ethylene glycol.
 - 6. A process according to claim 3 wherein said target is an amine.
 - 7. The target component separated by the process according to claim 1.